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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,753	07/06/2005	Tsuyoshi Koike	TIC-0081	9256
23377 7590 08/20/2007 WOODCOCK WASHBURN LLP CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET PHILADELPHIA, PA 19104-2891			EXAMINER CHEN, JUNPENG	
			ART UNIT 2618	PAPER NUMBER
			MAIL DATE 08/20/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/519,753	Applicant(s) KOIKE ET AL.	
	Examiner Junpeng Chen	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some    \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This action is in response to applicant's request of Continued Examination (RCE) filed on 08/03/2007 on amendments/arguments filed on 08/03/2007. Claims 1, 2, 5, 7 and 8 have been amended. Claims 10-15 have been added. Currently, claims 1-15 are pending.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-15** are rejected under 35 U.S.C. 102(b) as being anticipated by **Lubbe et al. (U.S. Patent No. 5,995,817)**.

Consider **claim 1**, Lubbe discloses a receiver (*read as a AM/FM audio device, lines 12-32 of column 1*) a high frequency demodulator circuit for demodulating a received signal (*read as an inherently existing demodulator that produces the demodulated signal by the low-pass filter 4, Fig. 1, lines 53-57 of column 3*); and a high-cut control de-emphasis circuit (*read as a "high cut" device for varying the cutoff frequency of a low-pass filter, lines 34-35 of column 1 of Lubbe, and that de-emphasis takes place in the low pass, line 53 of column 1*) following the high frequency demodulator circuit, the high-cut control de-emphasis circuit comprising a plurality of selected resistive elements (*read as the adjustable resistors, lines 55-65*), wherein the

high-cut control function and a de-emphasis function is made variable based on a selection of the plurality of selectable resistive elements, the selection based on a reception level (*read as varying the cutoff frequency of a low-pass filter by adjusting the resistors to perform high frequency reduction (de-emphasis) that takes place in the low pass in accordance with the received field strength, lines 34-65 of column 1*).

Consider **claim 2**, Lubbe discloses a receiver (*read as a AM/FM audio device, lines 12-32 of column 1*), comprising:

a demodulation unit for demodulating a received signal (*read as an inherently existing demodulator that produces the demodulated signal to the low-pass filter 4, Fig. 1, lines 53-57 of column 3*)

an attenuation unit which is connected in the stage following the demodulation unit and which has both a high-cut control function and a de-emphasis function (*read as a "high cut" device for varying the cutoff frequency of a low-pass filter, lines 34-35 of column 1 of Lubbe, and that de-emphasis takes place in the low pass, line 53 of column 1*) and attenuates the high frequency component of a received signal (*read as the low-pass filter 4 connects following the inherently existing demodulator to filter the high frequencies, Fig. 1, lines 53-61*);

a variable unit for making the cut-off frequency of the attenuation unit variable, the variable unit comprising a plurality of selectable resistive elements (*read as varying the cutoff frequency of a low-pass filter by adjusting the resistors to perform high frequency reduction (de-emphasis) that takes place in the low pass in accordance with the received field strength, lines 34-65 of column 1*); and

a generation unit for generating a control signal for controlling the operation of the variable unit based on the reception level of the received signal, the control signal directing a selection of the plurality of selectable resistive elements (*read as the inherently existing unit that controls the adjusting of resistors based on received field strength, lines 55-65 of column 1*).

Consider **claim 3, as applied to claim 2 above**, Lubbe discloses the receiver, wherein the generation unit generates a control signal for controlling the operation of the variable unit based on the reception level of the FM reception signal (*read as the inherently existing unit that controls the adjusting of resistors, lines 55-65 of column 1*).

Consider **claim 4, as applied to claim 2 above**, Lubbe discloses the receiver, wherein the generation unit generates a control signal so that the cut-off frequency of the attenuation unit becomes smaller as the reception level of the received signal becomes lower (*read as the cutoff frequency of the low-pass filter is lowered at field strengths supplying signal  $V_F$  below  $V_1$  and this lowering of the cutoff frequency goes as far as lower limit  $V_2$ , line 62 of column 3 to line 1 of column 4*).

Consider **claim 5**, Lubbe discloses a receiver (*read as a AM/FM audio device, lines 12-65 of column 1*), comprising:

a demodulation unit for demodulating the FM signal reception signal (*read as the AM/FM audio device operates in FM and an inherently existing demodulator that produces the demodulated signal to the de-emphasis unit (low pass filter 4), Figure 1*);

a plurality of selectable resistors connected following the demodulation unit (*read as the adjustable resistors, lines 55-65 of column 1*)

a changeover unit for selecting a resistance value of the plurality of selectable resistors (*read as the inherently existing adjusting unit that adjust the resistors, lines 55-65 of column 1*);

a capacitor which attenuates the high frequency components of the demodulated FM signal in combination with the resistance values(*read as the inherently existing capacitor in RC low pass filter 4, Figure 1*);

a generation unit for generating a control signal for controlling the changeover operation of the changeover unit based on the reception level of the FM signal (*read as the inherently existing unit that controls the adjusting of resistors based on received field strength, lines 55-65 of column 1*).

Consider **claim 6, as applied to claim 5 above**, Lubbe further discloses that the generation unit generates a control signal so that the resistance value of the resistor becomes larger as the reception level of the FM signal becomes lower (*read as the cutoff frequency of the RC low pass type de-emphasis unit, which is controlled by a signal similar to DS signal from A/D converter 2, is lowered at field strengths supplying signal  $V_F$  below  $V1$  and this lowering of the cutoff frequency goes as far as lower limit  $V2$ , Fig. 1, line 46 of column 3 to line 1 of column 4. Furthermore, this citation means that if the reception level of the FM signal goes lower, the cutoff frequency will be lower, ( $A \rightarrow B$ ). Since the de-emphasis unit is calculated by  $f_c = \frac{1}{2\pi RC}$ , where  $f_c$  is the cutoff frequency,  $R$  is the total Resistances and  $C$  is a constant which represents the total Capacitances. According to the formula, if cutoff frequency is becoming smaller, the total resistances will become larger, ( $B \rightarrow C$ ). By using train rule in logic, ( $A \rightarrow B$ ) and*

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*(B→C) will give A→C. Specifically, A→C means if the reception level of the FM signal becomes lower, the resistor becomes larger, which is the same thing as the resistance value of the resistor becomes larger as the reception level of the FM signal becomes lower).*

Consider **claim 7**, Lubbe discloses a receiver which receives an FM signal or an AM signal *(read as a AM/FM audio device, lines 12-65 of column 1)*, further comprising:

a demodulation unit for demodulating the FM signal reception signal *(read as the AM/FM audio device operates in FM and an inherently existing demodulator that produces the demodulated signal to the de-emphasis unit (low pass filter 4), Figure 1);*

a plurality of selectable resistors connected following the demodulation unit *(read as the adjustable resistors, lines 55-65 of column 1)*

a changeover unit for selecting a resistance value of the plurality of selectable resistors *(read as the inherently existing adjusting unit that adjust the resistors, lines 55-65 of column 1);*

a capacitor which attenuates the high frequency components of the demodulated FM signal or AM signal in combination with the resistance values *(read as the inherently existing capacitor in RC low pass filter 4, Figure 1);*

a first generation unit for generating a control signal for controlling the changeover operation of the changeover unit based on the reception level of the FM signal *(read as the inherently existing unit working in FM mode and controls the adjusting of resistors based on received field strength, lines 55-65 of column 1);*

a second generation unit for generating a control signal for AM for controlling the changeover operation of the changeover unit based on the reception level of the AM signal (*read as the inherently existing unit working in AM mode and controls the adjusting of resistors based on received field strength, lines 55-65 of column 1*);

a selection unit for selecting either the first control signal for the second control signal for AM based on a received signal and outputting the selected signal to the changeover unit (*read as since the AM/FM audio device is for AM/FM, it inherently has a selection unit which can select either FM or AM for reception, and thus control signal or control signal for AM can be selected accordingly based on either FM or AM detection, lines 12-65 of column 1*).

Consider **claim 8, as applied to claim 7 above**, Lubbe further discloses that the first generation unit generates a first control signal so that the resistance value becomes larger as the reception level of the FM signal becomes *lower* (*read as the cutoff frequency of the RC low pass type de-emphasis unit, which is controlled by a signal similar to DS signal from A/D converter 2, is lowered at field strengths supplying signal  $V_F$  below  $V1$  and this lowering of the cutoff frequency goes as far as lower limit  $V2$ , Fig. 1, line 46 of column 3 to line 1 of column 4. Furthermore, this citation means that if the reception level of the FM signal goes lower, the cutoff frequency will be lower,  $(A \rightarrow B)$ .*

Since the de-emphasis unit is calculated by  $f_c = \frac{1}{2\pi RC}$ , where  $f_c$  is the cutoff frequency,  $R$  is the total Resistances and  $C$  is a constant which represents the total Capacitances. According to the formula, if cutoff frequency is becoming smaller, the total resistances will become larger,  $(B \rightarrow C)$ . By using train rule in logic,  $(A \rightarrow B)$  and



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*(B → C) will give A → C. Specifically, A → C means if the reception level of the FM signal becomes lower, the resistor becomes larger, which is the same thing as the resistance value of the resistor becomes larger as the reception level of the FM signal becomes lower).*

Consider **claim 9, as applied to claim 7 above**, Lubbe further discloses the receiver further comprising:

a third generation unit for generating a third control signal for FM for controlling the changeover operation of the changeover unit in order to change the time constant of the de-emphasis function *(read as the AM/FM audio device is working in FM and a converter similar to analog-to digital converter 2 works in FM mode to receives a received filed strength signal about FM and converts this signal into a signal similar to digital signal DS to control adjustable resistors to vary the de-emphasis unit (low pass filter 4), Fig. 1 and Fig. 4, lines 44-52 of column 3 and lines 27-39 of column 2), and wherein*

the selection unit selects either the first control signal, the second control signal for AM or the control signal for FM based on the received signal and outputs the selected signal to the changeover unit *(read as since the AM/FM audio device is for AM/FM, it inherently has a selection unit which can select either FM or AM for reception, and thus control signal for FM or control signal for AM can be selected accordingly based on either FM or AM detection. Also, while in FM mode, a control signal will be selected for varying the de-emphasis unit, lines 12-32 of column 1).*

Consider **claim 10, as applied to claim 1 above**, Lubbe discloses wherein the high-cut function and de-emphasis function share a capacitive element (read as the inherently existing capacitor in RC low pass filter 4, Figure 1).

Consider **claim 11, as applied to claim 2 above**, Lubbe discloses wherein the high-cut function and de-emphasis function share a capacitive element (read as the inherently existing capacitor in RC low pass filter 4, Figure 1).

Consider **claim 12, as applied to claim 5 above**, Lubbe discloses wherein the changeover unit comprises a switch that selects at least one of the plurality of selectable resistors (read as the adjustable unit that adjusting the resistors, lines 55-65 of column 1).

Consider **claim 13, as applied to claim 5 above**, Lubbe discloses wherein the capacitor in part provides a de-emphasis function (read as the inherently existing capacitor in RC low pass filter 4, Figure 1).

Consider **claim 14, as applied to claim 7 above**, Lubbe discloses wherein the changeover unit comprises a switch that selects at least one of the plurality of selectable resistors (read as the adjustable unit that adjusting the resistors, lines 55-65 of column 1).

Consider **claim 15, as applied to claim 7 above**, Lubbe discloses wherein the capacitor in part provides a de-emphasis function (read as the inherently existing capacitor in RC low pass filter 4, Figure 1).

**Conclusion**

3. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Junpeng Chen whose telephone number is (571) 270-1112. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Junpeng Chen  
J.C./jc

  
**NAY MAUNG**  
SUPERVISORY PATENT EXAMINER